DATA SCIENCE FOR BEGINNER

You'll discover the applicability of data science across fields, and learn how data analysis can help you make data driven decisions. You'll find that you can kickstart your career path in the field without prior knowledge of computer science or programming languages: this Specialization will give you the foundation you need for more advanced learning to support your career goals.

Course Details

Duration

5 Days

Target Group

- All level

Pre-Requisite

- End-user skills with Windows-based PCs
- Basic knowledge of computing concepts

Certification

- Certificate of Completion

Course Objectives

After completing this course, participants are expected to be able to:

- Describe what data science and machine learning are, their applications and use cases, and various types of tasks performed by data scientists
- Gain hands-on familiarity with common data science tools including JupyterLab, R Studio, and GitHub
- Develop the mindset to work like a data scientist, and follow a methodology to tackle different types of data science problems
- Write SQL statements and query Cloud databases using Python from Jupyter notebooks

Course Outline

Lesson 1 - What is Data Science?
- Define data science and its importance in today's data-driven world.
- Describe the various paths that can lead to a career in data science.
- Summarize advice given by seasoned data science professionals to data scientists who are just starting out.
- Explain why data science is considered the most in-demand job in the 21st century.

Lesson 2 - Tools for Data Science
- Describe the Data Scientist's tool kit which includes: Libraries & Packages, Data sets, Machine learning models, and Big Data tools
- Utilize languages commonly used by data scientists like Python, R, and SQL
- Demonstrate working knowledge of tools such as Jupyter Notebooks and RStudio and utilize their various features
- Create and manage source code for data science using Git repositories and GitHub.

Lesson 3 - Data Science Methodology
- Describe what a data science methodology is and why data scientists need a methodology.
- Apply the six stages in the Cross-Industry Process for Data Mining (CRISP-DM) methodology to analyze a case study.
- Evaluate which analytic model is appropriate among predictive, descriptive, and classification models used to analyze a case study.
- Determine appropriate data sources or your data science analysis methodology.

Lesson 4 - Databases and SQL for Data Science with Python
- Analyze data within a database using SQL and Python.
- Create a relational database on Cloud and work with tables.
- Construct SQL statements including SELECT, INSERT, UPDATE, and DELETE.
- Compose more powerful queries with advanced SQL techniques like views, transactions, stored procedures, and joins.